

the structural side the development of feathers has been worked out; and the development of pigment in the feather, which was cleared up by the researches of Dr. R. M. Strong, has just been followed by a demonstration of the underlying principles of the distribution of that pigment in the feathers, in a paper by Dr. Oscar Riddle, in the *Biological Bulletin* for May. Dr. Riddle has also worked out "The Cause of the Production of "Down" and other "Down-like Structures in the Plumages of Birds," and the results appear in the *Biological Bulletin* for February of this year. On the side of color change and molt, Mr. C. William Beebe has experimented with birds in captivity, and his results seem to indicate that molt and the sequence of plumages, in the birds experimented with are "not in any way predestined through inheritance bringing about an unchangeable succession. . . . but that it may be interrupted by certain external factors in the environmental complex." On the psychological side Professor Francis H. Herrick has contributed several articles to *Science* relating to "Cyclical Instincts" of birds—migrating, courting or mating, nest building, incubating, care of young, etc. And still there is abundance of room for other studies by as many people as may have the inclination to enter upon research within this group of animals.

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#### FIELD NOTES.

THE "FARTHEST NORTH" RECORD OF THE CARMINAL IN IOWA.—On the bottom lands of the Mississippi River at the mouth of Sni Magill Creek, which is four miles south of the 43d parallel of latitude, on April 17th, 1908, a pair of Cardinals was seen by me. The female singing in a tree was noticed first, and she was soon joined by the male, also in song. From a resident of that locality it was learned that birds of their description were seen on a neighboring island on April 9th of this year. These birds are believed to be several miles farther north in Iowa than any of their species hitherto reported.

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A QUAIL TRAGEDY.—On the morning of February 27, 1908, near Sidney, Ohio, a flock of quails was noticed flying at full speed directly toward a house. The next instant they struck the building with a thud. We then observed that they had been pursued by a large hawk, possibly a Cooper's, although it seemed to be as large as a Red-tail. However, we failed to identify it. An examination showed that four quails had been killed instantly by the impact, and that two more had been stunned, one of which died in a few minutes. The other soon recovered, and upon hearing one of the scattered flock calling, we turned it loose. The ground was covered with snow and the sun